plateau resources
LIMITED

Rockstead

General Office: 772 Horizon Drive, Grand Junction, CO 81501 (303) 245-5460
Corporate Office: 212 West Michigan Avenue, Jackson, MI 49201 (517) 787-8415
Registered Office: 141 East First South, Salt Lake City, UT 84111 (801) 534-0734

R. B. Sewell
Manager of Operations

June 12, 1979
60255A

Mr. J. B. Rothfleisch
U. S. Nuclear Regulatory Commission
Nuclear Material Safety and Safeguards
7915 Eastern Avenue
Silver Spring, Maryland 20555

Dear Mr. Rothfleisch:

In reference to Mr. D. M. Ryan's letter of May 22, 1979 concerning the presence of endangered species on the Shootering Canyon Uranium Project site, our responses to the eight assessment items are attached. Based on recent aerial and ground surveys, there are no endangered or threatened plant and animal species present in the vicinity of the project site. In addition, there is no critical habitat for these species in the area.

Sincerely,
for R. B. Sewell
by T. O. Bailey

R. B. Sewell
Manager of Operations

RBS:g
attachment

ENDANGERED AND THREATENED SPECIES ASSESSMENT
FOR THE SHOOTERING CANYON URANIUM PROJECT

1. *Name of the project and applicant.*

Response:

Shootering Canyon Uranium Project
Plateau Resources Limited
772 Horizon Drive
Grand Junction, Colorado 81501

2. *Location (including map).*

Response: Refer to Section 2.1 and Figure 2.1 in the Draft Environmental Statement for the Shootering Canyon Uranium Project (NUREG 0504).

3. *Important dates, i.e., estimated beginning and completion of the project.*

Response:

a. November 1979. Issuance of Source Material License for Hydrojet Leaching Facility.

b. Early 1970's. Construction of leaching facility.

c. Early 1970's. Commenced mine development and mining for LS 8, 9, and 10 (LS 8 and 9 renamed Tony M in 1977).

d. February 1977. Plateau Resources Limited acquired Hydrojet properties.

e. May 1977. Commenced baseline environmental studies.

f. September 1977. Contracted for engineering and construction services.

g. May 1978. Applied for a new Source Material License.

h. September 1978. Filed a decommissioning plan for the Hydrojet Leaching Facility.

i. February 1979. Draft Environmental Statement for the Shootering Canyon Uranium Project issued.

j. August 1, 1979. Begin construction of the processing facility.

k. December 1980. Complete construction and begin operation of the processing facility.

l. 2000. Decommission the processing facility and reclaim areas disturbed by the project.

4. *Description of the proposed project and its purpose.*

Response: Refer to Section 1.1 of the Draft Environmental Statement for the Shootering Canyon Uranium Project (NUREG 0504).

5. *Identification of the listed or proposed endangered or threatened species and any legally determined critical habitat, or any habitat considered to be essential to the species which may be present in the area influenced by construction.*

Response: A field survey of the project area, including the process facility site, tailings impoundment area, topsoil and overburden storage sites, and the access road corridor was conducted on June 6 and 7, 1979. The purpose of this survey was to determine whether the proposed endangered and threatened plant species listed in Table 1 were present in the project area. This table includes the six species provided in the U. S. Fish and Wildlife Service (FWS) letter to the NRC dated May 22, 1979 and three additional species proposed as endangered by the FWS (U. S. Department of the Interior, 1976). Another 21 species listed as threatened by Dr. Stanley L. Welsh of Brigham Young University (1978) were also considered in the survey.

None of the proposed endangered species in Table 1 or the expanded list of 21 threatened species were observed in the project area during the survey. In addition, none of these species were noted during recent field studies conducted by Ms. Elizabeth Neese of Brigham Young University (personal communication, 1979) in the Henry Mountains.

The field survey and earlier biological studies of the project area indicate that no essential habitat necessary to support the proposed endangered species occurs in the project area. A review of the habitat descriptions in Table 1 indicates that the species occur either at much higher elevations than the project site or in different vegetation types.

An aerial survey of the project area was conducted by raptor specialists from Woodward-Clyde Consultants, the U. S. Fish and Wildlife Service, and the Utah Division of Wildlife Resources on June 6, 1979 to determine the presence of the American peregrine falcon (Falco peregrinus anatum) and the bald eagle (Haliaetus leucocephalus). The survey focused on the area within a 10-mile radius of the processing facility and tailings impoundment sites (Figure 1). This area was selected because 10 miles is the generally accepted foraging distance from nesting or perching sites for these two species (Snow, 1972, 1973; BLM, 1975; and Dr. Clayton White, Brigham Young University, personal communication, 1979). Additional observations were made beyond the 10-mile radius along cliffs bordering the Colorado River. These cliffs were considered to be the most favorable habitat for peregrine falcons and bald eagles in the project region.

Table 1. ENDANGERED PLANT SPECIES KNOWN FOR GARFIELD COUNTY, UTAH

Species	Status*	Known Distribution and Essential Habitat
Astragalus perianus	E[1] T[2]	Mountains north of Bullion Creek, near Marysvale, Piute County (Type collection) known in Piute and Garfield Counties. Endemic. Tertiary, ingenous gravels, often on barrens, in alpine sites above 9000 feet in elevation.
Castilleja aquariensis	E[1,2]	Aquarius Plateau, western Garfield County. Sagebrush-grass meadows in rocky soil in the Engelmann spruce - subalpine fir zone.
Castilleja revealii	E[1,2]	Paunsaugunt Plateau, extreme southwestern Garfield County. Limestone, gravelly soil in a ponderosa pine woodland at nearly 8000 feet in elevation.
Cryptantha ochroleuca	E[1,2]	Outcrop, 100 m south of Red Canyon Campground, along Utah Highway 12 in western Garfield County (Type collection) known in western Garfield County. Narrow endemic. Gypsiferous soil, western Garfield County.
Eriogonum aretioides	E[1,2]	Foothills of the Escalante Range, Widtsoe, western Garfield County. Endemic, edaphically restricted. Bare, limestone gravel benches at the 7750 foot elevation.
Eriogonum corymbosum var. *revealianum*	E[1] T[2]	Head of the canyon at milepost 26 south of Antimony along Utah Highway 22, extreme western Garfield County. Endemic, rare and local. Gravelly, boulder-strewn, east-facing slope.
Eriogonum cronquistii	E[1,2]	West side of Bull Mountain, Henry Mountains, eastern Garfield County. Endemic, restricted. Loose, decomposed granite talus slopes at 8300 feet elevation.

Table 1. (continued)

Species	Status*	Known Distribution and Essential Habitat
Heterotheca jonesii	E[1,2]	Near Springdale, Washington County, also in Garfield County. Endemic, rare, local. Sagebrush belt at 4000 feet elevation.
Ranunculus acriformis var. *aestivalis*	E[1] PoEx[2]	Springs just east of U. S. Highway 89 and about 1.5 miles south of the intersection with Utah Highway 20 to Parowan, extreme western Garfield County. Endemic, presumed extinct. Meadow at springs.

* E = Endangered; T = Threatened; PoEx = Possibly Extinct.

1. Status as listed by USDI, 1976.
2. Status as listed by Welsh, 1978.

Woodward-Clyde Consultants

Figure 1
Raptor Survey Area

Proj 60255A	Date 11 Jun 1979	Draft H M	Appr wcc

Habitat Preferences. Cliffs are the most commonly used nesting sites for the peregrine falcon and apparently represent the equivalent of escape cover. Peregrines generally nest on cliffs of igneous or sedimentary rock; however, they will also utilize the small caves typically found in limestone cliffs (Snow, 1973). This species normally selects nesting sites with an eastern exposure. Such sites receive the warmth of the morning sun but are protected during the afternoon.

Major prey species of the peregrine falcon include passerine birds, waterfowl, and shorebirds. Generally, falcon nesting sites are located adjacent to or relatively near prey populations.

Due to a lack of trees in the project region, the bald eagle is most likely to nest on cliffs. This species also prefers cliff sites with an eastern exposure.

In general, the bald eagle nests relatively close to large bodies of water where fish, the species' preferred prey, are plentiful. However, the bald eagle's food habits are extremely adaptable and in areas similar to the project region they may feed largely on jackrabbits (Snow, 1973).

Survey Results. No peregrine falcons or bald eagles were observed during the aerial survey. In addition, no critical habitat for either of the species was found in the area. The best available habitat observed during the survey is located approximately 10 miles south of the processing facility site along the banks of the Colorado River between California Bay and Ticaboo Creek. This habitat was not considered to be critical or essential to the peregrine falcon or the bald eagle since no evidence of the presence of either species was found there. It is the consensus of the raptor specialists that conducted the survey that project activities will not impact the peregrine falcon, bald eagle, or any critical habitat of both species.

6. *An assessment of the potential impacts of the construction or associated activities on the listed or proposed species or critical habitat.*

Response: Since no endangered or threatened plant or animal species or their critical habitats are present on the project site or in the area of potential project influence, there is no impact.

7. *Where impact is identified to listed or proposed endangered or threatened species or critical habitat, a discussion of the efforts that will be taken to eliminate any adverse effects.*

Response: Refer to the response to item 6.

8. *Pertinent portions of an environmental impact statement, environmental assessment, professional publication and other relevant materials.*

Response: Pertinent references to the endangered or threatened plant and animal species of concern in this project are provided below.

Bureau of Land Management. 1975. Snake River Birds of Prey Research Project. Annual Report 1975.

Corr, Patrick O. 1969. Bald eagle nest ecology. Federal aid in Fish and Wildlife Restoration. Unpublished, 11 pp. Available at Conservation Library, Denver Public Library.

Edwards, Clyde C. 1969. Winter behavior and population dynamics of American Eagles in Utah. Ph.D. Thesis, Brigham Young University, Provo, Utah. 156 pp.

Higgins, Larry C. 1971. A Revision of Cryptantha Subgenus Oreocarya. BYU Science Bulletin. Biological Series-Vol. 13, No. 4.

Holmgren, Noel H. 1973. Five New Species of Castilleja (Scrophulariaceae) from the Intermountain Region. Bulletin of the Torrey Botanical Club. Volume 100, No. 2, pp. 83-93.

McDougall, Walter B. 1973. Seed Plants of Northern Arizona. The Museum of Northern Arizona, Flagstaff.

Neese, Elizabeth. 1979. Personal Communication. Doctoral Candidate, Brigham Young University. Conducting Floristic Research in the Henry Mountains, near the proposed site.

Olendorff, Richard R. 1968. An extensive bibliography on falconry, eagles, hawks, falcons, and other diurnal birds of prey.

Porter, R. D. and C. M. White. 1973. The peregrine falcon in Utah, emphasizing ecology and competition with the prairie falcon. Brigham Young University Science Bulletin 18(1):74 pp.

Smith, D. G. and J. R. Murphy. 1973. Breeding ecology of raptors in the eastern Great Basin of Utah. Brigham Young University Science Bulletin 18(3):76 pp.

Snow, C. 1972. Habitat Management Series for Endangered Species. Report No. 1. American Peregrine Falcon.

Snow, C. 1973. Habitat Management Series for Unique or Endangered Species. Report No. 5. Southern Bald Eagle and Northern Bald Eagle.

Sprunt, Alexander, IV. 1969. Population trends of the bald eagle in North America. In Peregrine Falcon Populations: Their Biology and Decline. Joseph Hickey, Editor. The University of Wisconsin Press, Madison. 347-351.

Tidestrom, Ivar. 1925. Flora of Utah and Nevada. Contributions from the U. S. National Herbarium. Volume 25.

Welsh, Stanley L. and Glen Moore. 1973. Utah Plants, Tracheophyta. Brigham Young University Press, Provo.

Welsh, Stanley L., N. D. Atwood and J. L. Reveal. 1975. Endangered, Threatened, Extinct, Endemic, and Rare or Restricted Utah Vascular Plants. The Great Basin Naturalist. Brigham Young University, Provo. Volume 35, No. 4.

Welsh, Stanley L. and James L. Reveal. 1977. Utah Flora: Brassicaceae (Cruciferae). The Great Basin Naturalist. Brigham Young University, Provo. Volume 37, No. 3.

Welsh, Stanley L. 1978. Utah Flora: Fabaceae (Leguminosae). The Great Basin Naturalist. Brigham Young University, Provo. Volume 38, No. 3.

Welsh, Stanley L. 1978. Endangered and Threatened Plants of Utah: A Reevaluation. The Great Basin Naturalist. Brigham Young University, Provo. Volume 38, No. 1.

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R. B. Sewell
Manager of Operations

June 11, 1979

Mr. J. E. Rothfleisch
Uranium Recovery Licensing Branch
Division of Waste Management
U. S. NUCLEAR REGULATORY COMMISSION
Washington, D. C. 20555

RE: Docket No. 40-8698

Dear Mr. Rothfleisch:

Plateau Resources Limited has conducted detailed site surveys for the endangered species listed in the U. S. Fish and Wildlife Services letter dated May 22, 1979. This letter provides a brief summary of the results of these surveys.

On June 6, 1979, Messers Ron Freeman, Woodward-Clyde Consultants, Phil Wagoner, State of Utah, and Ron Joseph, U. S. Fish and Wildlife Service, Endangered Species Team (all raptorial biologists), performed a helicopter survey to identify whether either Peregrine Falcons or Bald Eagles were present in the area that would be affected by the Shootaring Canyon Uranium Project. The survey covered an area described by a fifteen mile radius from the site center. No Peregrine Falcons or Bald Eagles were found in the survey area.

On June 6 and 7, 1979, a detailed survey of the millsite and tailings area was performed by Messers Fred Gerdeman, Botanist, Plateau Resources Limited, and Jim VonLah, Botanist, Woodward-Clyde Consultants. The survey was specifically performed to ascertain whether the following plant species were present in the survey area:

Castilleja aquariensis (Indian Paintbrush)
Castilleja revealii (Indian Paintbrush)
Coyptantha ochrolenca (Catseye)
Eriogonum aretioides (Wild buckwheat)
Eriogonum cronguistii (Wild buckwheat)
Heterotheca jonesii (Telegraph plant, Jones)

(continued)

None of the aforementioned species were present in the survey area. In fact, based on a literature survey, most of these species only are known to occur at elevations about 4,000 feet above the millsite elevation or 8,500 feet above sea level. Those that do not are not known to occur within 150 miles of the millsite.

Thus we continue to conclude that the construction and operation of the Shootaring Canyon Uranium Project will have no impact on endangered or threatened species.

Yours Very Truly,

R B Dewey

RBS:sr

EXECUTIVE SUMMARY
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Plateau Resources Ltd.

Lucky Strike/Tony M. Mine
ACT/017/001
Frank M. Mine
ACT/017/017
Garfield County, Utah

COMMODITY:

The Lucky Strike/Tony M. Mine is a pre-existing uranium mine. Hydro-jet previously worked these claims until 1977 when Plateau Resources aquired the claims and lease hold interests. Ore recovery is by the underground modified room and pillar method. The mine life is projected to be 10-15 years.

The Frank M. Mine is a new, proposed mine. Mining will be conducted by means of horizontal drifts and lateral stope development. The mine life will be approximately 15 years.

LOCATION:

The Lucky Strike/Tony M. Mine is a 24 acre mining operation located in Sections 16 and 21, Township 35 South, Range 11 East, SLBM in Garfield County, Utah. The Frank M. Mine is a 65 acre mine located in Section 2, Township 35 South, Range 11 East. These locations are 55 miles south of Hanksville and 15 miles north of Bullfrog Basin via State Route 276 in Shootering Canyon.

The Enclosed map shows the location of these mines.

GEOLOGY AND SOILS:

The mining sites are located within the Henry Mountains Basin and is characterized by buttes, mesas and canyons. The buttes and mesas in this area are capped by the Salt Wash Member of the Morrison Formation. This sandstone unit contains the uranium deposits which are mined in the area. The site elevations are approximately 4,600 to 5,000 feet a.s.l.

Soils in the area are generally low in organic matter and range in texture from sand to loamy-fine sand. Any topsoil encountered from development will be stockpiled.

HYDROLOGY:

Surface waters in the vicinity of the sites consist of Shootering and Hansen Creeks which flow into Lake Powell. These streams have been categorized as Class C waters which means that without treatment these waters are suitable for irrigation, stock watering, recreation and the propagation and perpetuation of fish and wildlife. Baseline water quality sampling has been done by the U.S. Nuclear Regulatory Commission for the Environmental Statement related to the proposed uranium processing facility at the site. It is presumed that surface drainage at the site will not be affected.

Groundwater at the site is important for its potential source of water supply. The Entrada and Navajo sandstones contain the primary aquifers in the area and several springs exist in the vicinity. The area of mining is dry, however, and it is not expected that groundwater will be encountered.

ECOLOGY:

Studies of the ecology of this area were conducted in 1977 for the Environmental Report for the proposed uranium processing facility. Vegetative plant cover varies between 15 and 25% and is dominated by blackbrush and Mormon tea. Wildlife diversity of the area is very low. The site is of little importance to deer. No endangered species have been identified in the area.

STRUCTURES AND FACILITIES:

The major portion of structures and facilities at the Lucky Strike/ Tony M. site consist of the camp facilities which house the mine workers. Some 40 trailers comprise the camp. The mine facilities consist of trailers for the office and bathhouse, the water tank, the generator station, the waste dump area and the ore storage bins. The camp facilities will be relocated in the spring of 1980 and that area will be reclaimed as soon afterwards as possible. The site facilities at the Frank M. Mine will include a parking area, change house, shop, warehouse and storeyard, 3 ore bins, 2 trailers, 2 waste dump areas, generator, compressor units, water well and an access road.

MINING AND RECLAMATION:

During Operations (Lucky Strike/Tony M. Mine):

1. Mine development entry will commence from the cliff wall adjacent to previous mine openings. Mining and maintenance methods will be carried out in a safe and orderly manner. Disturbed materials will be waste and they will be allowed to seek their natural angles of repose. Waste rock will be used to maintain a low wide area for surface operation use.

2. Access roads in present use will be used for the mining project. The roads will have approximately 11% grades.

3. Site preparation will be completed by grading existing waste rock for level entry. No removal of trees or brush is necessary.

4. Any upper horizon material encountered will be stockpiled in an independent area for final reclamation.

5. Plant species for revegetation will be determined from test plot data.

6. A temporary camp, for employees only, will be maintained at the site. It will be moved when the Ticaboo site is ready in 1980.

During Operations (Frank M. Mine):

1. Mining and maintenance methods will be carried out in a safe and orderly manner.

2. Waste rock which is non-alkali or acid producing will be stored in a natural canyon-like depression the engineering of which complies with E.P.A. standards on flooding.

3. Site preparation will be completed by grading existing waste material for level entry. The removal of little brush will be required.

4. Any upper horizon material encountered will be stockpiled for final reclamation.

After Operations (Lucky Strike/Tony M. and Frank M. Mines):

1. Portal and ventilation shafts will be sealed to prevent unauthorized or accidental entry.

2. Waste rock dumps will be contoured to a naturally draining configuration.

3. Extraneous debris, unusable buildings, and scrap metal and wood will be removed from the location or buried.

4. All disturbed surfaces will be regraded, stockpiled soil added, and seeded.

6. Maintenance procedures for revegetation will be accomplished as necessary. The sites will be checked at least biannually by Plateau Resources personnel who will immediately augment any necessary steps in revegetation or erosion control. Critical sites and those not responding as projected will be checked more often.

IMPACTS:

The Lucky Strike/Tony M. mine facilities were in existence prior to the Utah Mined Land Reclamation Act under the direction of Hydro-Jet Services Inc. The reclamation plan will eliminate safety hazards and reduce environmental impacts.

The B.L.M. controls the surface use of the area in the vicinity of the Frank M. Mine although the mine area is previously owned. Primary uses of the area are for grazing and mineral exploration and mining. Extensive uranium exploration has occurred since the 1940's. Many of the abandoned drill roads and pads in the vicinity of the mine have been reclaimed by Plateau. Impacts to the environment due to development of this mine are expected to be minimal since the area has been determined to be of limited use to wildlife and hydrology.

SURETY ESTIMATE:

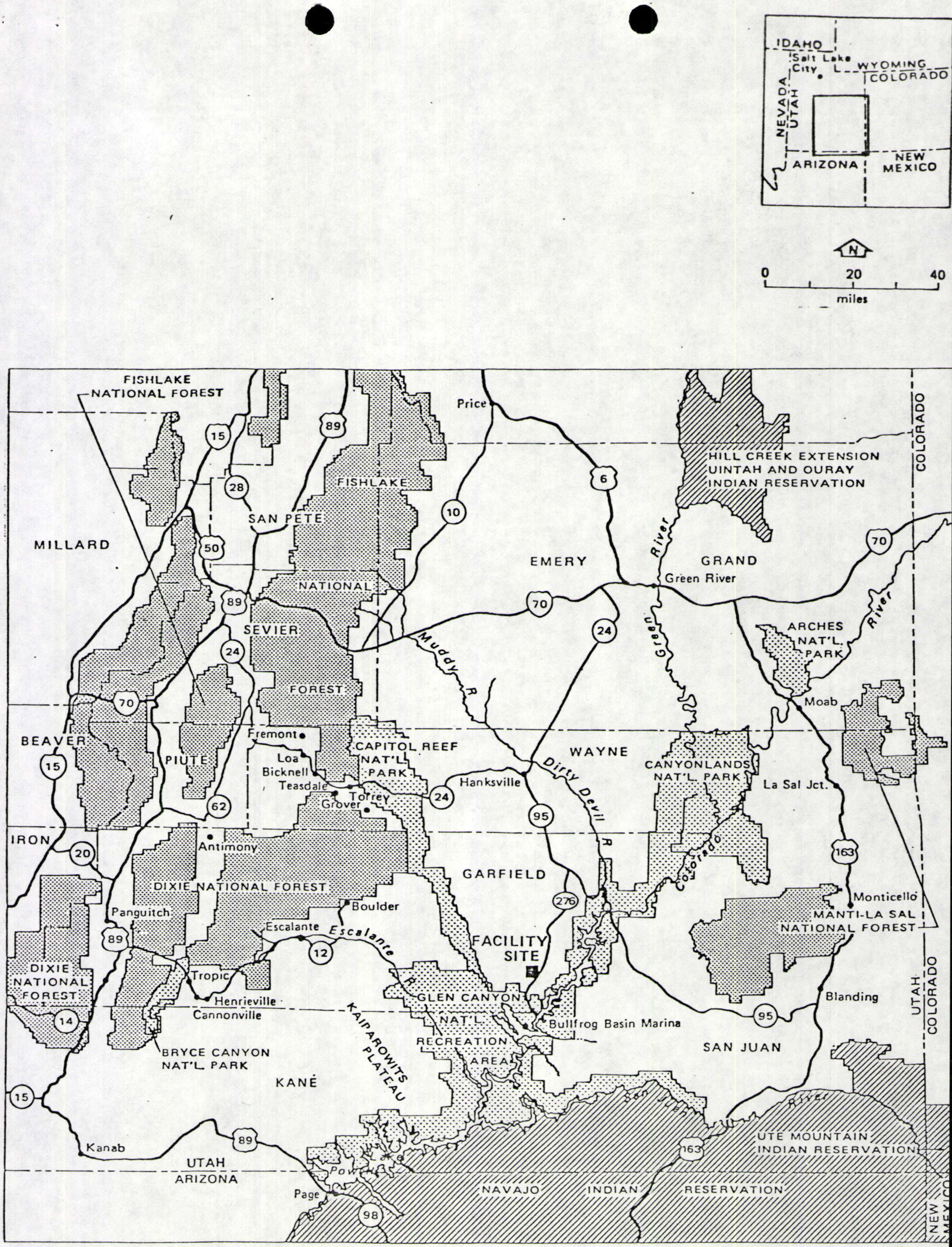
Surety was estimated at $25,840.00 for reclamation of the Lucky Strike/Tony M. and $46,619.00 was estimated for the Frank M. Mine. The proposed form of surety is a contract. A copy of the estimates are attached.

APPLICATION HISTORY (Lucky Strike/Tony M. Mine):

May 1977	Mining claims, leasehold interests and a leaching facility were acquired from Hydro-Jet Services.by Plateau Resources, Ltd.
June 1977	Mining and Reclamation plans were submitted to the Division.
February 1979	Amendments to the Mining and Reclamation plan were submitted to the Division.
March 1979	Division personnel inspected the mine and proposed mill site.

APPLICATION HISTORY (Frank M. Mine):

March 1979	Division personnel inspected the site of the proposed mine.
May 1979	Mining and Reclamation Plans were submitted to the Division.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Torrey
Grover
CAPITOL REEF
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IRON
Antimony
Colorado
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GARFIELD
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Monticello
MANTI-LA SAL
NATIONAL FOREST
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NEW MEXICO

DIVISION OF OIL, GAS, AND MINING

BOND ESTIMATE

OPERATOR: Plateau Resources, Ltd.
MINE NAME: Frank M. Mine
LOCATION: Sec. 2, Township 25 South, Range 11 East
COUNTY: Garfield
DATE: June 13, 1979

	Operation	Amount	Rate	Cost
A.	CLEAN-UP			
	1. Removal of structures & equipment.	$1,500.00	lump sum	$1,500.00
	2. Removal of trash & debris.	$ 500.00	lump sum	$ 500.00
	3. Leveling of ancillary facilities pads and access roads.			
B.	REGRADING & RECONTOURING			
	1. Earthwork including haulage and grading of spoils, waste and overburden.	60 hours cat time	$85.00/hr	$5,100.00
	2. Recontouring of highwalls and excavations.			
	3. Spreading of soil or surficial materials.			
C.	STABILIZATION			
	1. Soil preparation, scarification, fertilization, etc.	15 hours	$85.00/hr	$1,275.00
	2. Seeding or planting.	65 acres	$200/acre	$13,000.00
	3. Construction of terraces, waterbars, etc.			
D.	LABOR			
	1. Supervision.	40 hours	$10.00/hr	$ 400.00
	2. Labor exclusive of bulldozer time.			
E.	SAFETY			
	1. Erection of fences, portal coverings, etc.	seal 1 portal	$500/ea	$ 500.00
	2. Removal or neutralization of explosive or hazardous materials.			
F.	MONITORING			
	1. Continuing or periodic monitoring, sampling & testing deemed necessary.	3 inspection	$50.00/ea	$ 150.00
G.	OTHER			
	1. 5% inflation.	15 years	CAF=2.0789	$22,425.00
			Total	$46,619.00